

What is claimed is:

Claims 1-38 (canceled)

39. (new) An annular prosthesis for a heart valve comprising a chain having a plurality of links, wherein upon implantation, the prosthesis can reinstate the proper shape and dimensions of the valve annulus, the prosthesis implanted without necessity of suture stabilizers or placation bands.

40. (new) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis generates a saddle-shaped geometry and deforms three-dimensionally, while retaining an approximately constant three-dimensional perimeter.

41. (new) The annular prosthesis of Claim 40, wherein upon implantation, the prosthesis has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 1/3.

42. (new) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis retains an approximately constant three-dimensional perimeter, with a maximum variation in perimeter of less than approximately 10%.

43. (new) The annular prosthesis of Claim 42, wherein the maximum variation in perimeter is less than approximately 3%.

44. (new) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis maintains a normal chordal force distribution as its bending is dominated by its mechanical environment.

45. (new) An annuloplasty ring for a heart valve comprising a prosthesis, wherein upon implantation, the prosthesis maintains a normal chordal force distribution during the cardiac cycle as its bending is dominated by its mechanical environment.

46. (new) An annuloplasty ring for a heart valve comprising a prosthesis, wherein upon implantation, generates a saddle-shape geometry, and deforms three-dimensionally, while retaining an approximately constant three-dimensional perimeter.

47. (new) The annuloplasty ring of Claim 46, wherein the prosthesis has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 33%.

48. (new) The annuloplasty ring of Claim 47, wherein the prosthesis has a saddle height to commissural diameter ratio of approximately 25%.

49. (new) A supporting prosthesis for repairing pathological alterations of valves of the heart comprising:

a chain having a plurality of links;

shaping means, wherein upon implantation to annulus tissue, the chain generates a variable saddle-shaped geometry during the cardiac cycle, and deforms three-dimensionally, to reconstruct the shape of a valve, while maintaining the dynamics of the valve through appropriate flex and bend as to allow the valve to thereafter function correctly.

50. (new) The supporting prosthesis of Claim 49, wherein upon implantation, the chain maintains a normal chordal force distribution as its bending is dominated by its mechanical environment.

51. (new) A method of repairing pathological alterations of a heart valve comprising the steps of:

providing a chain having a plurality of links;

implanting the chain in a minimally invasive procedure; and

reconstructing with the chain the shape of a valve, while maintaining the dynamics of the valve through appropriate flex and bend as to allow the valve to thereafter function correctly.

52. (new) The method according to Claim 51, comprising the further step of directly implanting the chain to annulus tissue, wherein the chain is directly implanted to the annulus tissue without necessity of suture stabilizers or placcation bands.

53. (new) The method according to Claim 51, wherein the step of implanting comprises suturing the chain directly to the annulus tissue.

54. (new) The method according to Claim 51, wherein the step of implanting comprises clipping the chain directly to the annulus tissue.

55. (new) The method according to Claim 51, wherein the step of implanting the chain in a minimally invasive procedure occurs with a beating heart.

56. (new) The method according to Claim 51, comprising the further step of maintaining with the chain a normal chordal force distribution, as its bending is dominated by its mechanical environment.

57. (new) The method according to Claim 51, comprising the further steps of generating with the chain a saddle-shaped geometry; and

deforming the chain three-dimensionally, while retaining an approximately constant three-dimensional perimeter.

58. (new) The method according to Claim 57, wherein the chain has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 1/3.

59. (new) The method according to Claim 51, wherein the step of implanting the chain in a minimally invasive procedure comprises implanting the chain during a percutaneous approach.

60. (new) The method according to Claim 51, wherein the step of implanting the chain in a minimally invasive procedure comprises implanting the chain during an endovascular approach.